

KELLEY DRYE & WARREN LLP

A LIMITED LIABILITY PARTNERSHIP

WASHINGTON HARBOUR, SUITE 400

3050 K STREET, NW

WASHINGTON, D.C. 20007-5108

(202) 342-8400

FACSIMILE

(202) 342-8451

www.kelleydrye.com

NEW YORK, NY

TYSONS CORNER, VA

CHICAGO, IL

STAMFORD, CT

PARSIPPANY, NJ

BRUSSELS, BELGIUM

AFFILIATE OFFICES

JAKARTA, INDONESIA

MUMBAI, INDIA

DIRECT LINE: (202) 342-8518

EMAIL: tcohen@kelleydrye.com

September 24, 2009

VIA ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission
The Portals
445 - 12th Street, SW
Washington, DC 20554

Re: Notice of *Ex Parte* Presentation, GN Docket 09-51

Dear Ms. Dortch:

On September 14, 2009, Geoff Burke and David Russell of Calix, Donny Smith of Jaguar Communications, and I met with staff of the Commission to discuss the National Broadband Plan inquiry and the current status and cost of Fiber to the Premises (FTTP) deployments in the United States and specifically in rural areas. The staff asked that we provide in writing greater detail on the cost of deploying FTTP networks in rural areas. To that end, we are enclosing a spreadsheet detailing the costs incurred by Jaguar Communications ("Jaguar") in installing FTTP networks in the Blooming Prairie area – composed of one rural city and four nearby townships – and the Credit River Township, all in southern Minnesota. The spreadsheet also contains Jaguar's costs to deploy and operate a fixed wireless network. In reviewing these data, the Commission should note:

- Jaguar is a rural competitive local exchange carrier operating since 2002. Today, it has over 10,000 customers, many of which subscribe to its triple-play (voice, data, and video) packages and others who access voice and data services. It uses a variety of technologies, fixed and wireless, to reach its customers and thus has experience with different business models. It accesses no universal service funding.

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- A crucial element in Jaguar's success is its ability to enroll a high percentage of potential (passed) customers. It expects, at worst (the "low" scenario), a take-rate of 60% in its most rural areas and 38% in the rural city and believes the more likely rates (the "high" scenario) are 80% and 50%, respectively. While these take-rates are not atypical of other rural FTTP providers, they are much higher than most current urban FTTP deployments.
- Wireline networks are deployed along roads and other well-defined rights of way, and thus the proper metric for measuring the cost of a FTTP deployment is "households (or premises) per linear mile." In contrast, for multi-point wireless networks, a "per square mile" metric should be used.
- The total cost per home passed of the FTTP network correlates relatively closely with the number of households per linear mile. In the Blooming Prairie city with 51.36 homes per linear mile, the cost is below \$500, while in the much less dense Blooming Prairie township (2.38 homes per linear mile), the cost is about 8 times greater. The total cost per home served in these two areas, assuming the high penetration rate, is \$1533.93 and \$4917.68, respectively.
- Jaguar is able to make the FTTP networks in these rural communities profitable, not only by having a high penetration rate, but also because it can produce greater revenues per customer over FTTP plant and because it has substantial savings in operational and repair costs. In addition, FTTP plant has a very long useful life – 40 years for the optical cables and 25 years for outside plant components.
- From Jaguar's experience deploying fixed wireless networks (the last column of the spreadsheet), it has found that the initial costs of deployment are about 60% of the cost for the FTTP deployment in Blooming Prairie city and less than 20% of the cost in Blooming Prairie township. However, the fixed wireless infrastructure lacks the capabilities of FTTP and has a much shorter life – five years or less. In addition, the total repair costs are substantially greater for fixed wireless deployments. In other words, when viewed by total cost of ownership and service capability, FTTP is far preferable in other than the most-remote and least dense rural deployments.

Should you wish to discuss these data further, please contact me.

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Sincerely,



Thomas Cohen
Kelley Drye & Warren LLP
3050 K Street, NW
Suite 400
Washington, DC 20007
Tel. (202) 342-8518
Fax. (202) 342-8451
tcohen@kelleydrye.com
Counsel for Calix

Attachment: Jaguar Communications Cost of Deployment Spreadsheet

cc: Julius Knapp
Walter Johnston
Kevin King
B.J. Neal
Stagg Newman
Joseph Soban

September, 2009

Entity	Blooming Prairie City	Blooming Prairie Twp	Summit Twp	Aurora Twp	Somerset Twp	Blooming Prairie All	Credit River Twp	
Type of Deployment	FTTP	FTTP	FTTP	FTTP	FTTP	FTTP	FTTP	Wireless
Area	1.20	34.80	36.00	36.00	36.00	36.00	24.00	
Road Mileage	16.55	74.46	71.14	67.57	71.01	300.73	87.81	
Fiber Mileage	9.18	36.70	40.14	35.70	37.10	158.82	70.09	
Fiber_to_Rd	0.55	0.49	0.56	0.53	0.52	0.53	0.80	
Fiber Ratio %	55.47	49.29	56.42	52.83	52.25	50.41	79.82	
Plow %	0.28	0.88	0.88	0.88	0.88	0.83	0.15	
Plow Miles	2.57	31.56	34.52	30.70	31.91	131.26	10.51	
Plow Cost	21,714.74	266,635.78	291,628.34	259,370.50	269,541.89	1,108,891.24	88,818.05	
Bore %	0.72	0.12	0.12	0.12	0.12	0.17	0.85	
Bore Miles	6.61	4.40	4.82	4.28	4.45	24.57	59.58	
Bore Cost	265,230.03	176,723.71	193,288.55	171,908.35	178,649.86	985,800.50	2,390,685.79	
Raw Construction Cost	286,944.77	443,359.49	484,916.89	431,278.85	448,191.74	2,094,691.74	2,479,503.84	
Handhole Totals	212.50	285.00	285.00	271.00	296.00	517.50	468.00	
Handhole Cost	79,687.50	114,375.00	106,875.00	101,625.00	111,000.00	194,062.50	175,500.00	
Splicing Cost	30,430.00	41,125.00	44,640.00	41,200.00	45,200.00	71,555.00	112,315.00	
Engineering Cost 10%	36,663.23	55,773.45	59,179.19	53,290.38	55,919.17	228,875.42	265,500.38	
Total Cost	403,295.49	613,507.94	650,971.08	586,194.23	615,110.92	2,517,629.66	2,920,504.22	
Households Passed	850.00	177.00	180.00	220.00	324.00	1,751.00	1,689.00	
Households per linear mile	51.36	2.38	2.53	3.26	4.56	11.28	19.23	
Households per sq mile	708.33	5.09	5.00	6.11	9.00	28.53	70.38	
Sub percentage Low	0.38	0.60	0.60	0.60	0.60	0.37	0.60	
Sub percentage High	0.50	0.80	0.80	0.80	0.80	0.56	0.80	
Subs Low	323.00	106.20	108.00	132.00	194.40	863.60	1,013.40	
Subs High	425.00	141.60	144.00	176.00	259.20	1,145.80	1,351.20	
Subs per linear mile Low	35.19	2.89	2.69	3.70	5.24	4.18	11.54	
Subs per linear mile High	46.30	3.86	3.59	4.93	6.99	6.32	15.39	
Subs per sq mile Low	226.67	3.05	3.00	3.67	5.40	10.56	42.23	
Subs per sq mile High	297.50	4.07	4.00	4.89	7.20	15.98	56.30	
Total Cost per Home Passed	474.47	3,466.15	3,616.51	2,664.52	1,898.49	1,437.82	1,729.13	
Total Cost per Sub Low	1,833.59	6,361.91	6,612.51	5,025.87	3,749.15	3,500.27	3,466.89	
Total Cost per Sub High	1,533.93	4,917.68	5,105.63	3,915.65	2,958.11	2,782.27	2,746.42	
	24,368.31	8,239.43	9,150.56	8,675.36	8,662.31	16,225.09	33,259.36	
Square Mile Cost	336,079.58	17,629.54	18,082.53	16,283.17	17,086.41	69,934.16	121,687.68	
Linear Mile Cost	24,368.31	8,239.43	9,150.56	8,675.36	8,662.31	8,371.73	33,259.36	
Fiber Mile Cost	43,931.97	16,716.84	16,217.52	16,420.01	16,579.81	15,852.09	41,667.92	
Drop Cost - Low	48,450.00	15,930.00	16,200.00	19,800.00	29,160.00	129,540.00	152,010.00	
Drop Cost - High	63,750.00	21,240.00	21,600.00	26,400.00	38,880.00	171,870.00	202,680.00	
Hardware Cost - Low	140,505.00	46,197.00	46,980.00	57,420.00	84,564.00	375,666.00	440,829.00	
Hardware Cost - High	184,875.00	61,596.00	62,640.00	76,560.00	112,752.00	498,423.00	587,772.00	
Total Cost per Sub Low No Ele	592,250.49	675,634.94	714,151.08	663,414.23	728,834.92	3,022,835.66	3,513,343.22	
Total Cost per Sub High No Ele	651,920.49	696,343.94	735,211.08	689,154.23	766,742.92	3,187,922.66	3,710,956.22	
Customers	425.00	141.60	144.00	176.00	259.20	1,145.80	1,351.20	375.00
Installed Cost/ Customer	1,533.93	4,917.68	5,105.63	3,915.65	2,958.11	2,782.27	2,746.42	875.00
Monthly Amortized Cost	3,950.51	4,219.71	4,455.23	4,176.14	4,646.31	19,319.18	22,487.66	6,042.92
Monthly Service Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Service Call Cost	140.00	140.00	140.00	140.00	140.00	140.00	140.00	180.00
Total Repair	152.06	50.66	51.52	62.97	92.74	409.94	483.43	2,523.36
Total Cost	4,102.57	4,270.37	4,506.75	4,239.11	4,739.05	19,729.12	22,971.09	8,566.28
Avg Per Customer	9.65	30.16	31.30	24.09	18.28	17.22	17.00	22.84
Avg Repair Cost per Customer	0.36	0.36	0.36	0.36	0.36	0.36	0.36	6.73

JAGUAR COMMUNICATIONS COST OF FIBER TO THE PREMISES DEPLOYMENTS IN RURAL MARKETS
September, 2009

Bore Cost Core Cost Cable Costs

	7.60	7.00	0.60
Plow Cost			
	1.60	1.00	0.60
HH			
	375.00		
Splice			
	1,218.33		
ONT_OLT COST			
	435.00		
Drop Cost			
	150.00		